

REMARKS

Receipt of the Office action mailed October 7, 2003, is acknowledged. In the Office action claims 13-26 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 13 and 19 were rejected as being obvious in view of Griswold et al. (U.S. Patent No. 6,027,115) and claims 14-18 and 19-26 were rejected as obvious in view of a number of references. In the above amendments, claims 14-26 have been cancelled and claims 27-40 have been added.

In view of above amendments and the following remarks, reconsideration of the application is respectfully requested.

Claim Objections

Claims 20-22 were objected to for lacking antecedent basis. New claims 34-36, which correspond to previous claims 20-22, now refer to a slot machine rather than a gaming apparatus. Reconsideration and withdrawal of the claim objections are respectfully requested.

Indefiniteness Rejections

Claims 13-26 were rejected under §112, second paragraph, as being indefinite for use of the phrase "contacting the outer region at two points separated by an angular displacement of ninety degrees" in claims 13, 19, and 23. In particular, the Office action states that "[t]he means by which the angular displacement along the outer circumferential region is measured or referenced, as well as what is meant by such measurements would not be readily ascertained by one of ordinary skill in the art." The Office action further states that "[t]he displacement of the angle is not defined in a manner that distinctly describes the manner and location at which the contact occurs."

To the extent that the phrase "angular displacement" is interpreted in its specific technical sense to mean the difference in angle between a point and a reference as that point rotates at a radius around the reference, Applicants agree with the Examiner's rejection. Accordingly, new claims 27, 33, and 37, which generally correspond to previous claims 13, 19, and 23, now recite "contacting the outer region at two points that define endpoints of an arc of said circumferential region having a central angle of about ninety degrees." The concepts of an arc and its corresponding central angle would be well known to those of ordinary skill in the art, and therefore adequate support for this claim language is found in Fig. 2. Furthermore, this phrase is more technically precise and accurate in describing two

points on the outer circumferential region of the reel, and therefore would be sufficiently definite to one of ordinary skill in the art. Reconsideration and withdrawal of the indefinite rejection are respectfully requested.

The Prior Art Rejections of Claims 13 and 19

On page 3 of the Office action, the prior art rejections are introduced under the heading "***Claim Rejections - 35 USC § 103***". The first rejection articulated under this rejection, however, asserts that claims 13 and 19 "are rejected under 35 U.S.C. 102(b) as being anticipated by Griswold..."(emphasis added). In developing the rejection, the Office action argues that:

While the exact angular displacement is not disclosed, it would be an [sic] obvious to one of ordinary skill in the art that for the strip to function in a gaming reel of a round configuration as disclosed, the displacement would be about or at least ninety degrees between the points. (emphasis added)

Accordingly, this response assumes that the rejection of claims 13 and 19 is based on obviousness under 35 U.S.C. § 103, rather than anticipation under 35 U.S.C. § 102 as specifically stated in the Office action. If this assumption is incorrect and the Examiner intended to assert an anticipation rejection, Applicants traverse the rejection as improper for arguing that an element of the claims is an obvious modification of the prior art, and specifically request that a new, non-final action be issued clarifying the basis for the rejection of claims 13 and 19.

In view of the foregoing, Applicants interpret the Office action as rejecting independent claims 13 and 19 under 35 U.S.C. § 103(a) as obvious over Griswold et al. (U.S. Patent No. 6,027,115). While these claims have been canceled, claims 27 and 33 are directed to similar subject matter. Accordingly, should claims 27 and 33 be rejected on similar grounds, applicants respectfully traverse any such prospective rejection.

Independent claims 27 and 33 recite, *inter alia*, a slot machine reel rotatable about an axis and having an outer circumferential region with a flexible display mounted on the outer circumferential region of the gaming apparatus reel. The flexible display has a flexibility that allows the flexible display to be elastically bent from a substantially straight configuration to a curved configuration, wherein the curved configuration is capable of contacting the outer circumferential region of the gaming apparatus reel at two points that define endpoints of an arc of said circumferential region having a central angle. In claim 27, the central angle is

described as being about ninety degrees, while claim 33 specifies a central angle of at least ninety degrees. Both claims specify that the flexible display is adapted to display an indicium to a player of the gaming apparatus. Thus, the plain language of claims 27 and 33 defines a display that is capable of generating an indicium and that is elastically flexible through an arc of about or at least ninety degrees.

Applicants previously submitted that the plain and ordinary meaning of "elastic" is the ability of something to readily return to its original shape after being flexed. In support, applicants submitted a copy of the definition from *The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company*, which defines "elastic" as "Easily resuming original shape after being stretched or expanded." In the instant Office action, the Examiner observes that an alternative definition of "elastic" is "capable of [adapting to] change or a variety of circumstances." The Office action states that the reel strip of Griswold is "elastic in that it is changed from a straight to a curved configuration when placed about the reel."

The alternative definition of "elastic" adopted by the Office action is improper because it is not the meaning that would be used by those of ordinary skill in the art. As set forth in Section 2111.01 of the M.P.E.P., when the words of a claim are not defined in the specification, they must be given their plain meaning. The undefined claim terms are not to be interpreted to include any possible definition, but rather "they must be read as they would be interpreted by those of ordinary skill in the art." (emphasis added) M.P.E.P. Section 2111.01, citing *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342, 60 USPQ2d 1851, 1854 (Fed. Cir. 2001). To determine the meaning to those of ordinary skill in the art may require a term's "commonly accepted technical meaning" be used. *In re Barr*, 444 F.2d 588, 597, 170 USPQ 330, 339 (CCPA 1971).

One of ordinary skill in the casino gaming apparatus art would interpret the term "elastic" in its technical sense to mean "capable of returning to an initial form or state after deformation." The casino gaming apparatus artisan of ordinary skill would have knowledge of at least basic mechanical and materials concepts, including elastic and plastic deformation. As such, one of ordinary skill in the art would interpret term "elastic" in its technical sense to describe a member that returns to its original shape after deflection, as opposed to "plastic" deformation, where a member does not retain its original shape after a deflection force is removed. To support this technical interpretation, Applicants submit herewith a copy of the definition from the *Academic Press Dictionary of Science and Technology, Copyright © 1992*

by *Academic Press, Inc.*, which defines "elastic" as "able to return to its original shape after experiencing strain and removal of deforming stress." Applicants submit that this dictionary provides a technical definition for the term "elastic" and is the meaning that would be given to the term by those of ordinary skill in the art. Accordingly, Applicants respectfully request that the claims of the present application be interpreted consistent with this definition.

With the term "elastically" properly interpreted in accordance with the foregoing, it is not seen that Griswold teaches or suggests flexible display that may be elastically bent from a substantially straight configuration to a curved configuration, wherein the curved configuration is capable of contacting the outer circumferential region of the gaming apparatus reel at two points that define endpoints of an arc of said circumferential region having a central angle of about or at least ninety degrees, as specified in claims 27 and 33. Accordingly, the rejection as asserted against claims 13 and 19 must be withdrawn.

More specifically, the Office action cites column 3, lines 39-42 of Griswold as disclosing a flexible reel strip. That entire paragraph of the Griswold patent that contains that excerpt is set forth below:

Yet another aspect of the invention provides a reel strip for use as a display portion of a slot machine reel. Such reel strips may be characterized as including the following elements: (a) a flexible substrate; (b) a first electrode formed on the substrate; (c) one or more electroluminescent elements formed on at least a portion of the first electrode; and (d) a second electrode formed over at least the electroluminescent elements. At least one of the first and second electrodes should be transparent. Often a second substrate, including inked images of symbols, will be affixed to the second electrode.
(Column 3, lines 39-49)

As disclosed in the above excerpt and in other sections of the patent, Griswold discloses a reel strip 303 that is constructed from at least five separate layers: 1) a substrate 450 which may be made from a flexible material, 2) a conductive layer comprising traces 405 and lower capacitor plates 407, 3) an isolation layer 455 containing electroluminescent dielectric elements 453, 4) another conductive layer comprising traces 421 and capacitor plates 423, and 5) a printed cover strip 457 containing silk screened (i.e., static) images.

Although the excerpt at column 3, lines 39-42 of Griswold cited in the Office action discloses that the reel strip may include a flexible substrate, that does not mean that the reel strip is itself may be elastically bent as specified in claims 27 and 33. In fact, the Office action makes no assertion as to whether the reel strip of Griswold may be elastically bent.

Instead, Griswold teaches that the flexible substrate 450 is only one of at least five layers of the reel strip.

Furthermore, there is no express disclosure in Griswold that the reel strip, after all of its constituent layers have been assembled together, may be elastically bent through an arc of ninety degrees as recited in claims 27 and 33. As but one general example, it should be apparent that if two layers that were separately elastically flexible through an arc of about ninety degrees were bonded together with an adhesive to form a composite structure, that composite structure would not necessarily be elastically flexible through an arc of about ninety degrees. In this example, the adhesive could fail as the composite structure is flexed, thus destroying the composite structure. This scenario could apply: 1) if the adhesive were applied to the substrates when they were in a straight configuration and if the resulting composite structure were then attempted to be bent through an arc of about ninety degrees after the adhesive dried, or 2) if the adhesive were applied to the substrates when they were in a curved configuration about an arc of ninety degrees and if the resulting composite structure were then attempted to be straightened.

The prior art must disclose at least a suggestion of an incentive for a claimed combination of elements in order to establish a prima facie case of obviousness. No such suggestion is apparent from the cited prior art, and hence the obvious rejection asserted against claims 13 and 19 may not properly be applied against claims 27 and 33.

The Rejection of Claims 14-18 and 20-26

Claims 14, 17, 18, 20, 22-24, and 26 stand rejected under 35. U.S.C. §103(a) as being unpatentable over Griswold in view of Acres et al. (U.S. Patent No 6,008,784) in view of "Universal Display: FOLED Technology" ("FOLED"). Claims 15, 16, 21 and 25 stand rejected under 35. U.S.C. §103(a) as being unpatentable over Griswold in view of Acres et al. (U.S. Patent No 6,008,784) in view of FOLED for the same reasons as claims 14, 17, 18, 20, 22-24, and 26, and further in view of "Business Week 2000: The Tube." While claims 14-18 and 20-26 have been canceled, claims 28-32 and 34-40, respectively, are directed to similar subject matter. Accordingly, should claims 38-32 and 34-40 be rejected on similar grounds, applicants respectfully traverse any such prospective rejection.

As a preliminary point, Applicants note that at no point do the rejections of claims 14-18 and 20-26 assert that the proposed combination discloses or suggests a flexible display that may be elastically bent from a substantially straight configuration to a curved

configuration, as specified in each of the rejected claims. While the Office action appears to give the term "elastically" no patentable significance, Applicants have demonstrated above that those of ordinary skill in the art would give this term a specific technical meaning. Accordingly, the obviousness rejections as stated in the Office action fail to assert that each element of the claims is disclosed or taught in the cited prior art, and therefore the rejections must be withdrawn.

Notwithstanding this deficiency in the rejection as stated, Applicants submit that there is no motivation to combine the cited references as applied in the Office action. The mere fact that references can be modified is not sufficient to establish a prima facie case of obviousness. See Section 2143.01 of the M.P.E.P., which states: "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)" (emphasis original). In order to establish a prima facie case of obviousness, there must be actual evidence of a suggestion to modify a prior art reference or to combine two prior art references, and the suggestion to combine or modify the prior art must be clear and particular. See, for example, *In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999), where the Court of Appeals for the Federal Circuit stated:

The range of sources available, however, does not diminish the requirement for **actual evidence**. That is, the showing must be **clear and particular**. Broad conclusory statements regarding the teaching of multiple references, standing alone, are **not 'evidence.'** (emphasis added, citations omitted).

The suggestion to combine references must be from the prior art, not Applicants' disclosure. See Section 2143 of the M.P.E.P., which states: "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

The rejections of all of claims 14-18 are based on the following excerpt from the Office Action:

Universal Display Corporation: FOLED Technology discloses that it is advantageous to substitute the use of normal LEDs with the FOLED technology. Motivations for doing so include the flexibility of FOLED, the ultra-lightweight, thin-form, as well as the durability and cost-effective processing. The usage of one flexible display over another would be an obvious design choice of one of ordinary skill in the art based

upon the desired functionality for the machine as defined by the designer. Once of ordinary skill in the art would thus find it obvious to substitute the FOLED technology over that disclosed. Therefore it would have been obvious to one of ordinary skill in the art to incorporate the dynamic FOLED format into the flexible display as disclosed by Acres et al. One of ordinary skill in the art would be motivated to make this design choice in order to provide a more efficient, flexible, durable and cost effective means to display information. One would be motivated to incorporate FOLED as cost would be reduced as FOLED is less breakable, more impact resistance and more durable as well as more cost-effective to produce.

Office Action, pp. 5-6 (emphasis added).

Thus, the motivations set forth in the Office action for combining the applied documents cited can be summarized as the following: 1) flexibility; 2) weight reduction; 3) durability; and 4) cost-effectiveness. These alleged motivations are simply general considerations that do not provide actual evidence of a suggestion to modify the gaming machines of Griswold and Acres specifically with the FOLED display, as required for a proper combination. Instead, the purported motivations are discussed in FOLED with reference to mass-produced consumer products such as cell phones, portable computers, and televisions. Accordingly, it is not seen that the prior art fairly suggests the motivation for the proposed combination of prior art, absent the improper use of hindsight, and therefore the obviousness rejection as applied against claims 14-18 must be withdrawn.

Each of the purported motivations, as well as the "Response to Arguments" presented in the instant Office action, is addressed in greater detail below.

Flexibility

In describing Griswold and Acres, the Office asserts that these references already disclose a flexible display. As such, it is not seen how one of ordinary skill in the art would be motivated by flexibility to combine FOLED with the already flexible (at least according to the Office action) displays of Griswold and Acres. The instant Office action responds to this position by stating:

Because Griswold and Acres already disclose flexible displays, one of ordinary skill in the art would merely find it a design choice to substitute other types of flexible displays as the type of actual display used would be a design choice to a system already embodied to support flexible displays.

Even if the selection of a flexible display is a matter of "design choice," as now asserted by the Office action, it is not seen how such "design choice" provides motivation to combine the specific FOLED reference with Griswold and Acres. Furthermore, it is not alleged, nor is there actual evidence of, a suggestion or motivation to modify Griswold and Acres with a flexible display that may be elastically bent from a substantially straight configuration to a curved configuration. Consequently, any flexibility advantages taught in FOLED would not provide incentive to one of ordinary skill in the gaming machine art to combine FOLED with Griswold and Acres.

Weight Reduction

Acres and Griswold disclose casino-type slot machines, which are typically large, stationary machines utilized in casinos. FOLED, however, states that the use of a flexible display will "reduce the weight of flat panel displays in cell phones, portable computers, and, especially, large-area televisions-on-the-wall," which are products in which the display comprises a relatively significant portion of the overall weight of the product. Consequently, there is no suggestion or teaching in FOLED that its display provides significant weight reduction in products where the display comprises a relatively minor portion of the overall weight of the product, as in a gaming machine. Certainly, FOLED fails to specifically suggest use in gaming machines.

Instead, one of ordinary skill in the art would know that any weight reduction afforded by the substitution of a FOLED display would be trivial in comparison to the overall weight of a gaming machine, and therefore would not provide motivation to combine FOLED with Griswold and Acres. The Examiner has argued in the instant Office action that the teachings of Griswold and Acres could be used in a tabletop machine, which "typically must be carried and set up by the owner and thus reducing any weight would be beneficial." Displays provided on the reels of even a tabletop gaming machine, however, are not a significant weight component of the overall structure. Accordingly, any such reduction in the overall weight of the machine attributable to the use of a FOLED display would be marginal, and certainly not detectable as the gaming machines are "carried and set up by the owner". The weight of the displays provided on slot machines reels is not a consideration in the design of modern gaming machines, and therefore the weight reduction, if any, described in FOLED would not motivate those of ordinary skill in the gaming machine art to combine FOLED with Griswold and Acres.

Durability

In the previous response, Applicants argued that slot machine reels are disposed behind a protective cover and therefore are not subject to wear. Consequently, one of ordinary skill would not be motivated to combine FOLED with Griswold and Acres to improve durability.

In the present Office action, the Examiner admits that durability is not a "first round consideration," but argues that a more durable material would be desirable nonetheless. In support, the Examiner argues that:

Even though only a small amount of wear and tear may be saved by using the more durable FOLED, if one considers the size of most casinos and the number of gaming machines in each, it would come to represent a significant consideration in that even saving the wear and tear by a small amount could translate into a substantial amount of savings for the operator.

There is no support in the cited prior art for the Examiner's assumption that the FOLED saves even "a small amount" of wear and tear on a slot machine reel. Instead, FOLED discusses durability with respect to its "glass-based counterpart" and, in other portions, to its applicability to "cell phones, portable computers and...televisions". At no point does it disclose or suggest that the FOLED display would improve durability of a slot machine reel. Furthermore, at no point does the Examiner identify actual evidence in the prior art of a problem with the durability of slot machine reels. Standard slot machine reels are enclosed within a housing that prevents access by a user. It is not suggested in the cited prior art that slot machine reels suffer from even "a small amount" of wear during operation, or, if they do, that the conventional displays used on slot machines were not capable of withstanding "a small amount of wear and tear". Simply put, the durability of the reels is not a consideration in the design of modern gaming machines, nor does the prior art so suggest. Therefore, it is respectfully submitted that one of ordinary skill in the art would not have been motivated to combine FOLED with Griswold and Acres for purposes relating to durability of slot machine reels.

Cost-Effectiveness

FOLED fails to affirmatively suggest that its display provides any cost savings. Instead, it simply states that FOLEDs "are projected to have full-production level cost advantage over most flat panel displays." Furthermore, FOLED states that "While

continuous web FOLED processing requires further development, this process may provide the basis for very low-cost, mass production." Consequently, FOLED makes no claim that its product currently provides cost advantages. Instead, FOLED opines of a mere possibility that such cost advantages may be possible in the future. A merely speculative assertion of cost savings such as that made by FOLED does not provide sufficient motivation to one of ordinary skill in the art to support the proposed combination of FOLED with Griswold and Acres.

For the foregoing reasons, it is respectfully submitted that no proper motivation exists to combine FOLED with Griswold and Acres, and therefore the obviousness rejection as asserted against claims 14-18 should be withdrawn.

In support of the rejection of claims 15, 16, 21, and 25, the Office Action indicates that low power consumption was a purported motivation for the combination of Griswold, Acres, FOLED, and the Tube:

A possible motivation to one of ordinary skill in the art to use a flexible LCD over a FOLED is that LCD is known to consume very little power and thus would save the casino money in the electricity required to run the machine. Hence the use of a flexible LCD over a FOLED would have been obvious to one of ordinary skill in the art.

While the Tube discloses a "low voltage LCD which lets a pared-down processor do most tasks," the Tube is concerned with a laptop computer, wherein battery life and power consumption is of utmost concern. Clearly, lower power consumption is of paramount importance to such portable electronic devices. At no point does the Tube disclose or suggest, however, that such power consumption reduction would be of any importance to primarily stationary devices that are connected to a utility power grid, rather than a battery, let alone specifically suggesting that the reduced power consumption afforded by a flexible LCD is particularly desirable in gaming machine design.

The present Office action asserts that power consumption "represents overhead to the casino and any reduction in said overhead would be beneficial and thus desirable." It is arguable whether "overhead" due to power consumption is a particularly significant consideration to the typical casino owner, since his main objective is to attract and entice players and the primary method of doing so typically requires a display, novelty device, or performance prop that consumes a significant amount of power. One only need consider the typical casino, with its displays and amusement attractions, to understand that casino owners

will expend exorbitant amounts on energy costs simply to attract attention and potential players. Consequently, while a reduction in "overhead" due to energy costs may be desirable on a general level, casino owners will demand that the lower power-consuming alternative produce at least the same amount or intensity of light to attract players to the machines. The Tube fails to disclose or suggest that its flexible LCD is capable of producing light that is sufficiently bright and intense as the light generated by displays used in gaming machines, or that it would otherwise be capable of attracting the attention of a player. Accordingly, reduction of power consumption, in and of itself, would not motivate one of skill in the gaming machine art to combine the Tube with FOLED, Acres, and Griswold as proposed in the Office action.

New Claims 27-40

Claims 27-40 generally correspond to claims 13-26 as previously presented. Accordingly, for the foregoing reasons, it is respectfully submitted that these claims are in condition for allowance for at least the reasons noted above.

Conclusion

In view of the foregoing, the above-identified application is believed to be in condition for allowance. In the event there is any remaining issue that the examiner believes can be resolved by a telephone conference, the examiner is respectfully invited to contact the undersigned attorney at the number identified below.

Respectfully submitted,

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